

In Re Application of: Presby, David W.
Serial No.: 10/695,883
Filed: October 29, 2003
Confirmation No.: 7811

For: Method, Apparatus and Actuatable Perforator
For Creating Apertures in Pipe and Pipe Produced Thereby

Group Art Unit: 3671
Examiner: Mayo, Tara L.
Dkt. No: PY374-SKIM
Paper No. 3

conduit, classified in class 405, subclass 49.

REMARKS

Examiner has required a restriction of applicant's invention under 35 U.S.C. § 121. Applicant has provisionally elected with traverse to prosecute the invention defined by the claims of group I, the claims drawn to a perforator/skimmer tab former. Applicant respectfully request Examiner to withdraw this requirement for restriction of the application to include only claims 1 - 4 and submits that the invention of Group I is the same invention as the invention of Group II, Group III and Group IV. Applicant has provided, for the convenience of Examiner, a copy of the independent claim 1 of Group I, independent claim 5 of Group II, and independent claim 6 of Group III and independent claim 7 of Group IV.

Detailed Remarks:

In paragraph 1 of examiner's office action, examiner made a requirement for a restriction. Applicant acknowledges the requirement for restriction and elects with traverse to prosecute the invention of group I, claims 1 - 4.

In paragraph 2 of Examiner's office action, Examiner states that the restriction is proper because the two sets of claims Group I and Group II are distinct. Additionally, Examiner suggests that in this case the combination s claimed does not require the particulars of the subcombination as claimed because the combination does not include all of the structural limitations of the subcombination. The subcombination has separate utility such as for use on a prefabricated article.

Applicant notes that the independent claim 1 of Group I is basically the definition of "A perforator/skimmer tab former having a plurality of edges and surfaces each edge of said plurality of edges being configured each relative to each other edge and each surface configured in relative position and geometry with each of said edges, said perforator/skimmer tab former comprising:" and the various elements of claim 1 simply define features of the . . . tab former.

Claim 5 of Group II is basically "A pipe skimmer actuator system for creating a specially designed cylindrical conduit for use in leaching systems, said fabrication system comprising:" and included in this actuator system is - in short form - "at least one actuatable

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perforator/skimmer tab former (i.e., see Claim 1) positioned into and a substantial part of at least one of said mold-half is timely activated and forms thereby a perforation and skimmer tab into soft plastic, wherein said perforator/skimmer tab former is actuatable within said at least one mold body;

actuator shafts, springs (detail not included here). . . .;” and note that the next element of Claim 5 is very similar to the definition of the invention defined in Claim 1 - i.e., -

“said perforator/skimmer tab former having a first edge tip portion which first edge tip portion is advanced into said plastic within preferably a valley region, said first edge tip portion pierces and cuts through the material along one edge and as said perforator/skimmer tab former is further advanced, two edges are cut by two second edges and at the same time the plastic material within the cut region is pressed or rolled, by a roll surface into the interior of the conduit while being substantially attached or “hinged” along a fourth uncutting roll edge, said fourth edge has incorporated thereon a slight v-shape which causes a small amount of spreading of the plastic thereby inhibiting the skimmer tab from tending to move back toward the aperture from which the tab was created.”

Claim 5 - Group II - is another invention but it is an invention which uses the elements of the invention defined in Claim I.

In paragraph 3 of Examiner’s office action, Examiner provides remarks relative to Group I and Group III arguing that the restriction is proper because the two sets of claims Group I and Group III are distinct. Additionally, Examiner suggests that “ . . . in this case the step of forming the perforations or skimmer tabs can be practiced by hand.” In response to Examiner’s reasons for this restriction requirement, applicant has provided the following remarks. Applicant agrees that any reasonably skilled person could cut and bend the “skimmer tab”. But the invention of Claim 1 used in the system of Claim 5 and such use defined by the method of Claim 6 “A method of forming a specially designed cylindrical conduit for use in leaching systems and forming at least one pipe aperture skimmer within corrugated or smooth walled conduit, said method comprising:” produces a corrugated or smooth wall pipe having, very likely, a plurality of skimmer tabs.

In paragraph 4 of Examiner’s office action, Examiner provides remarks relative to Group I and Group IV arguing that the restriction is proper because the two sets of claims Group I and Group IV are distinct. Additionally, Examiner suggests that in this case the apparatus as claimed

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is not an obvious apparatus for making the product and the apparatus can be used for forming perforations/skimmer tabs in a preformed, planar sheet of material. In response to Examiner's reasons for this restriction requirement, applicant has provided the following remarks. Claim 7 of the Group IV invention as defined by Examiner, is a "conduit, having perforations and skimmer tabs therein being produced by the method comprising the steps of: (Applicant is not including the method steps except withdrawing said at least one perforator/skimmer tab former such that said perforation and skimmer tab, having inwardly rolled edges, is left in said soft conduit-forming material and no conduit-forming material is removed;)" because such method step involves the tab former of Claim 1. It is known to Applicant that there is nothing like this conduit in existence and no one was aware of the advantages of such a skimmer tab as an element/feature of the conduit.

The Inventions of Group II and III - Inventions of II and IV - and Inventions of III and IV:

In response to Examiner's reasons for the restriction requirement of paragraphs 5., 6., and 7. Applicant has provided remarks relative to the remarks and comments to Examiner's paragraphs 2., 3. and 4. provided above.

Generally:

Relative to paragraph 8, Applicant respectfully submits that in view of the arguments provided above the classification of the four groups into different classes is not dispositive and the claims of Groups I, II, III and IV should be prosecuted in the present application.

Independent Article of Manufacture claim 1:

1. A perforator/skimmer tab former having a plurality of edges and surfaces each edge of said plurality of edges being configured each relative to each other edge and each surface configured in relative position and geometry with each of said edges, said perforator/skimmer tab former comprising:

 said plurality of edges having a first edge, a fourth edge and two second edges, said first edge and said fourth edge being substantially at two opposing positions and said first edge elevated above said fourth edge, each of said two second edges substantially opposing each other and with

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the one end of each contacted with said first edge and the other end of each contacted with said fourth edge and wherein said first edge is the first cutting edge, each of said two second edges being the second cutting edges and said fourth edge being the rolledge, said first edge, when in use is advanced into said plastic within preferably a valley region, and pierces and cuts through the material along one edge and as the former is further advanced, each of said two second edges cause cut and at the same time the plastic material within the cut region is pressed and rolled into the interior of the conduit by a roll surface while being substantially attached or "hinged" along the fourth edge called the rolledge; and

said roll surface causing the rolling of said material being pierced and cut, having four ends and each of said four ends being substantially in contact with one of said edges one portion, said rolling being directed into the interior region of said conduit being created with aperture/skimmer tabs, which said perforator/skimmer tab former, upon activation causes the creation of aperture/skimmer features as part of conduction component for a leach processing system.

Independent System Claim 5:

5. A pipe skimmer actuator system for creating a specially designed cylindrical conduit for use in leaching systems, said fabrication system comprising:

at least one mold body wherein said at least one mold body has at least a first mold half and at least a second mold half, wherein said first and said second mold halves are advanceable linearly together and wherein said first and said second mold-halves are closeable, thereby creating a cavity into which molten conduit-forming material is injectable and wherein said at least one mold body is openable to release said material when said material is set and formed as conduit and wherein said first mold-half and second mold-half, may be advanced together as mold-halves by, for example, a chain and which mold-halves are closed creating a cavity wherein plastic is injected;

at least one actuatable perforator/skimmer tab former positioned into and a substantial part of at least one of said mold-half is timely activated and forms thereby a perforation and skimmer tab into soft plastic, wherein said perforator/skimmer tab former is actuatable within said at least one mold body;

actuator shafts, springs around said actuator shafts which provide controlled pressure and force to said perforator/skimmer tab former attached thereto, wherein said actuator shaft attached to said perforator/skimmer tab former is configured onto said mold and positioned to create a pipe aperture skimmer when pressure and force is provided to said shaft;

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said perforator/skimmer tab former having a first edge tip portion which first edge tip portion is advanced into said plastic within preferably a valley region, said first edge tip portion pierces and cuts through the material along one edge and as said perforator/skimmer tab former is further advanced, two edges are cut by two second edges and at the same time the plastic material within the cut region is pressed or rolled, by a roll surface into the interior of the conduit while being substantially attached or "hinged" along a fourth uncutting roll edge, said fourth edge has incorporated thereon a slight v-shape which causes a small amount of spreading of the plastic thereby inhibiting the skimmer tab from tending to move back toward the aperture from which the tab was created.

Independent Method Claim 6:

6. A method of forming a specially designed cylindrical conduit for use in leaching systems and forming at least one pipe aperture skimmer within corrugated or smooth walled conduit, said method comprising:

forming at least one conduit-forming mold body, each said at least one mold body comprised of a first mold-half and a second mold-half;

locating at least one perforator/skimmer tab former within at least one of either said first or said second mold-halves of said at least one conduit-forming mold body;

inearly advancing said first and said second mold-halves together continually throughout the process;

closing said first and said second mold-halves, thereby creating a cavity wherein conduit-forming material is injectable;

injecting molten conduit-forming material into said cavity;

while said conduit-forming material is still in a semi-molten state, actuating said at least one perforator/skimmer tab former such that said at least one perforator/skimmer tab former forms a perforation and skimmer tab into into the soft conduit-forming material;

withdrawning said at least one perforator/skimmer tab former such that said perforation and skimmer tab, having inwardly rolled edges, is left in said soft conduit-forming material and no conduit-forming material is removed;

allowing the newly formed specially designed cylindrical conduit to cool and set;

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opening said first and said second mold-halves of each said at least one mold body; and
removing said formed conduit, having said perforations and skimmer tabs therein, from said
at least one conduit-forming mold body.

Independent Product produced by said Method Claim 7:

7. Conduit, having perforations and skimmer tabs therein being produced by the method
comprising the steps of:

forming at least one conduit-forming mold body, each said at least one mold body comprised
of a first mold-half and a second mold-half;

locating at least one perforator/skimmer tab former within at least one of either said first or
said second mold-halves of said at least one conduit-forming mold body;

linearly advancing said first and said second mold-halves together continually throughout the
process;

closing said first and said second mold-halves, thereby creating a cavity wherein conduit-
forming material is injectable;

injecting molten conduit-forming material into said cavity;

while said conduit-forming material is still in a semi-molten state, actuating said at least one
perforator/skimmer tab former such that said at least one perforator/skimmer tab former forms a
perforation and skimmer tab into into the soft conduit-forming material;

withdrawing said at least one perforator/skimmer tab former such that said perforation and
skimmer tab, having inwardly rolled edges, is left in said soft conduit-forming material and no
conduit-forming material is removed;

allowing the newly formed specially designed cylindrical conduit to cool and set;

opening said first and said second mold-halves of each said at least one mold body; and
removing said formed conduit, having said perforations and skimmer tabs therein, from said at least
one conduit-forming mold body.

Conclusion:

Applicant respectfully submits that the invention defined in claims 1 - 7 should be prosecuted
in one application and therefore Applicant request Examiner to withdraw the requirement to restrict
the application to one of the defined Groups I - IV. Applicant further submits that the application is

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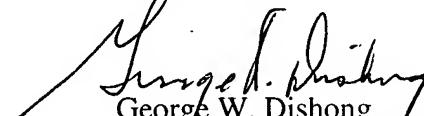
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in condition for allowance and early notice of allowance is requested.

The fees associated with this response, if there are any due, are included herewith. Applicant respectfully requests that Examiner contact his attorney by telephone, by e-mail or by facsimile if there are any additional questions relative to this patent application.

Respectfully submitted,



George W. Dishong
Attorney for Applicant
Reg. No. 31,348

George W. Dishong
DISHONG LAW OFFICES
40 Bryant Road
Jaffrey, New Hampshire 03452
Tel # 603-532-7206; Fax # 603-532-7303
E-mail: dishongpatlaw@monad.net